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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/025,515
Filing Date: December 18, 2001
Appellant(s): WEBLER ET AL.

John V. Hanley
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed February 14, 2007 appealing from the Office action mailed August 30, 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

.(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

4,750,476	Forkner et al.	6-1988
Re. 36,434	Hamlin et al.	12-1999

(9) Grounds of Rejection

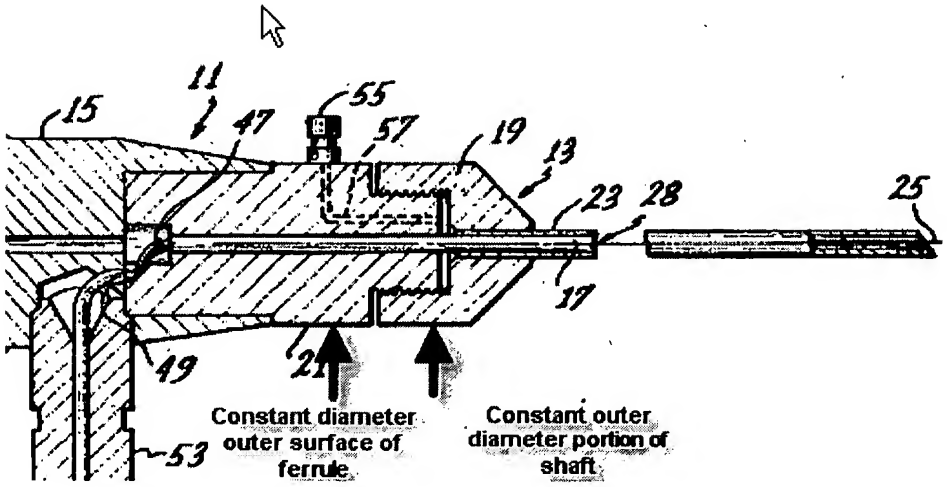
The following ground(s) of rejection are applicable to the appealed claims:

I. Claims 1-5, 8, 9, 17, 19 and 31-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Forkner et al. (U.S. Pat. 4,750,476)[1].

Forkner et al. disclose an elongated shaft (cannula 23 and nut 19, see col.2, lines 58-60 and col.3,lines 50-53), the proximal portion (proximal portion of 19) having a substantially constant outer diameter (see Figure below), an optical pathway (space within distal end of the cannula 23 that passes optical radiation), an internal surface (inner surface of cannula 23) defining a internal chamber (space within proximal end of cannula 23), an elongated optical fiber (41, Fig.2) bound by tube (17) and extending substantially the entire length of the internal chamber (Fig.2), and a ferrule (21, Fig.1) directly connected to the optical fiber (inside ferrule along tube 17 and also at location 49, Fig.1) and having an constant diameter outer surface (surface shown in Fig.1 containing fitting 55, as shown in Figure below) that is substantially the

[1] The following grounds of rejection substantially repeat those found in the Final Rejection, mailed August 9, 2005, as modified in the Non-final Rejection, mailed March 14, 2006. Modification of the grounds of rejection was in response to the Amendments filed December 12, 2005.

same as the outer diameter of the proximal portion of the shaft (see Figure below). Threads (not



numbered but shown in Fig.1) between the proximal portion of the shaft (on nut 19) and the distal portion of the ferrule (21) allows a secured position and a released position, wherein, in the released position, the shaft (23,19) will inherently be able to rotate "freely"(by rotation of the nut guided by the threads or once the nut is separated from the ferrule).

As to claim 2, a threaded connection is considered to be, in part, a friction-fit connection. As to claim 3, note that the threads exist between a portion of the ferrule outer surface and a portion of the shaft inner surface (Fig.1). As to claim 4, the shaft/optical fiber of Forkner et al. can be considered an optical guidewire. As to claim 5, the ferrule distal outer surface is cylindrical and rounded (Fig.1). As to claims 8 and 9, the ferrule proximal portion is configured to form an operable optical and mechanical connection with the eyepiece optics (not numbered but inherently in the eyepiece housing) and the eyepiece housing (15), respectively (Fig.1).

As to claim 17, the structure of the optical guide wire is described above. All other elements that are substantially identical to those in claim 1 are discussed above. The optical and mechanical connection of the ferrule (21) to the eyepiece housing (15) forms optical and mechanical connectors. Since the eyepiece housing is inherently rotatable in space, the mechanical connector will be rotatable and the ferrule will rotate "when engaged to said mechanical connector while said mechanical connector rotates". As seen in Figure 1, the ferrule distal portion is configured to be dispose within the shaft internal chamber (claims 31 and 33). As to claims 32 and 34, the proximal aperture (roughly where lead line 47 points) of the ferrule can be considered a "slot".

II. Claims 1-5, 8, 9, 17, 19 and 31-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Hamlin et al. (Re 36,434)[2].

Referring mainly to Figures 3 and 4, Hamlin et al. discloses an optical instrument (camera 22, left side of Fig.3) including an optical connector (lens, CCD chip optically connected to the optical system 14, Fig.3), a mechanical connector (threads 42), and an optical guide wire including an elongated shaft (18, Fig.4) having a longitudinal axis and proximal (56) and distal portions (54) having ends, the proximal portion (56) having a substantially constant outer diameter (Fig.4 or Figure below), an optical pathway configured for passing optical radiation (64), and an internal surface having a proximal portion (inner surface of proximal portion 56, Fig.4) and defining an internal chamber (inner space of proximal portion 56) within

[2] The following grounds of rejection substantially repeat those set forth in the Final Rejection mailed August 30, 2006.

the elongated shaft extending to the optical pathway; an elongated optical fiber (26 or note that optical system 14 can be an optical fiber (col.8, lines 6-11)) extending substantially an entire

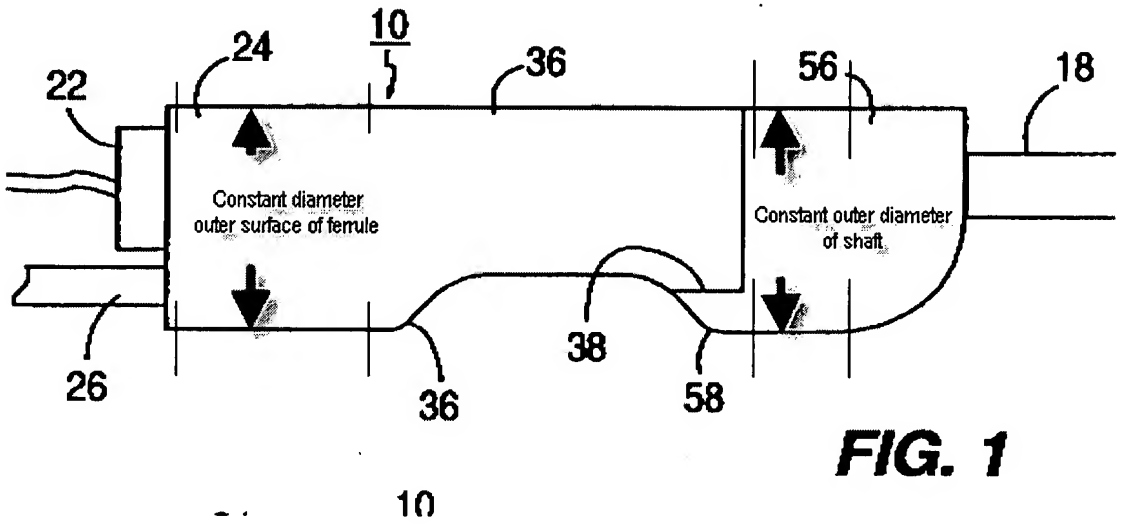


FIG. 1

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length of said internal chamber of said elongated shaft (note Fig.3); and a ferrule (10) directly connected to said optical fiber (Fig.3) and having a distal portion (16) with a diameter and an outer surface (Fig.3), a proximal portion (24) with a substantially constant outer diameter and an outer surface (see Figure above), the outer diameter being substantially the same as the outer diameter of the elongated shaft proximal portion (note the diameters indicated in the Figure above are substantially the same) and configured to have a first position in which said ferrule is secured to the elongated shaft (Fig.1) and a second position in which the ferrule is released from the elongated shaft (Figs.3 and 4) and is thus free to rotate around said longitudinal axis.

As to the remaining claims, note that the elongated shaft and ferrule are secured by a friction fit (col.6, lines 3-5). The proximal aperture in the shaft provides a "slot". Also the proximal end (58, Fig.4) of the shaft helps define the reduced diameter portion in the ferrule (see Fig.7) which can be considered a "slot".

(10) Response to Argument

I. Response to Arguments concerning the rejection of claims 1-5, 8, 9, 17, 19 and 31-34 under § 102(b) as being anticipated by Forkner et al.

It is noted that only independent claims 1 and 17 are specifically argued by Appellant. These claims are easily argued together since they contain substantially similar limitations (claim 17 encompasses claim 1 and adds a few additional limitations). All issues addressed below apply to both independent claims.

Appellant argues that it is beyond the teachings of Forkner et al. to characterize nut (19) and cannula (23) as being part of the light transmitting fiber (41). The Examiner agrees. It appears that Appellant misinterpreted the Examiner's statement ("Furthermore, considering elements (19) and (23) as the elongated shaft and tube (17) as part of the optical fiber...). The Examiner is only reading tube (17) as part of the optical fiber. Nut (19) and cannula (23) read on "an elongated shaft" of the claims. Given that tube (17) confines and bounds the optical fiber (41) and appears to be an integral part of the image transmitting means of Forkner et al. (note Fig. 2, col.2, lines 61-68), the Examiner takes the position that it is reasonable to consider the tube (17) as being a part of the claimed "optical fiber". *Importantly, it is noted that this interpretation is consistent with Appellant's specification (note paragraphs [0094] and [0096]) which suggests that materials that join or bundle the optical fibers, or even just clads or wraps an optical fiber or fibers for strength, would be considered an integral part of such "optical fiber".*

Regarding the above mentioned clarification, the nut (19) forms the proximal end of the elongated shaft. It has a portion with a constant outer diameter (note label for such in the above

Figure provided in the grounds of rejection with respect to Forkner et al.). The ferrule (21) of Forkner et al. also has a proximal portion with outer surface with a constant diameter (note label for such in the above Figure provided in the grounds of rejection with respect to Forkner et al.). As indicated in the drawings, the diameters are substantially the same. Thus, the Examiner respectfully submits that the structure of Forkner et al. does indeed meet such limitations of claims 1 and 17.

Appellant further states that a ferrule "having a first position where it is secured to the elongated shaft and a second position where it is released from the shaft" is not taught by Forkner et al. No explanation is provided. Appellant fails to address or explain the error in the Examiner's contention that threaded nut (19) and threaded distal section of the ferrule (21) (not numbered but clearly shown in Figure 1) would allow a releasably secured connection. Thus, the Examiner still maintains that such function does occur and the structure of Forkner et al. meets such limitations of claims 1 and 17.

Appellant further states, in reference to claim 17, that Forkner et al. also does not teach "a ferrule configured to engage a rotatable mechanical connector such that the ferrule rotates when engaged to the mechanical connector". Again, no explanation is provided. As previously pointed out in the grounds of rejection, eyepiece housing (15) constitutes an "optical instrument" and the ferrule is configured to be mechanically (note connection of ferrule 21 and eyepiece housing 15 in Figure 1) and optically (eyepiece housing transmits light to ferrule from connecter 53 and receives and image from the ferrule for display at viewing location 27) connected to the eyepiece housing. Rotation of the eyepiece housing will inherently rotate the mechanical connector, which, in turn will rotate the ferrule (as well as the elongate shaft). In other words,

everything can rotate together. This meets the limitation of the ferrule being "configured to engage said rotatable mechanical connector effective that said ferrule rotates when engaged to said mechanical connector while said mechanical connector rotates" (last few lines of claim 17). Thus, the Examiner still maintains that such function is met by the structure of Forkner et al.

Given no convincing evidence or persuasive arguments that the Examiner has made an error in rejecting claims 1 and 17, as well as all dependent claims listed in the rejection, over Forkner et al., the Examiner respectfully maintains the position that Forkner et al. anticipates each and every element and limitation of at least claims 1 and 17.

II. Response to Arguments concerning the rejection of claims 1-5, 8, 9, 17, 19 and 31-34 under § 102(b) as being anticipated by Hamlin et al.

It is noted that only independent claims 1 and 17 are specifically argued by Appellant. These claims are easily argued together since they contain substantially similar limitations (claim 17 encompasses claim 1 and adds a few additional limitations). All issues addressed below apply to both independent claims.

Appellant argues that Hamlin et al. does not teach a ferrule directly connected to an optical fiber. As can be seen in Figure 3 (show below) of Hamlin et al., both optical fiber (26) and optical system (14) (which, as noted by the rejection, can be an optical fiber) extend into and at least partially through the ferrule. Is the Examiner to assume that Appellant is suggesting that the optical fiber (26), which extends the entire length of the ferrule (10), or optical fiber (14) (as noted in the rejection), which appears to be held in alignment with lens (52) inside the ferrule, is magically floating through such ferrule so as to have no direct connection with it? The Examiner

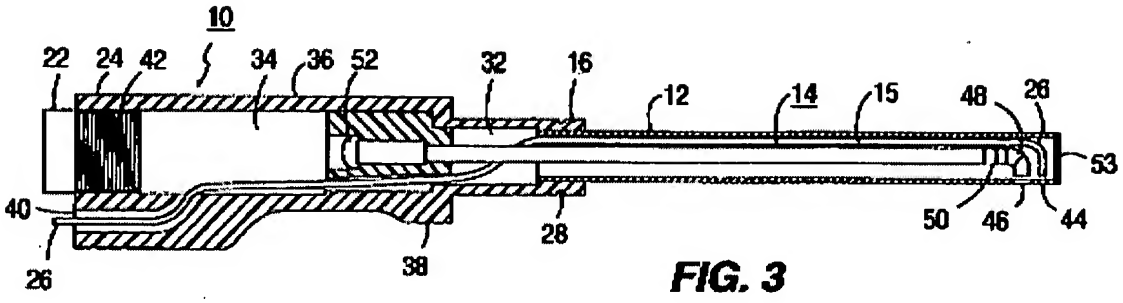


FIG. 3

finds that hard to believe. The Examiner, as well as any other reasonable person, would have to assume, from the laws of physics, that, without a teaching that there is only air between optical fibers (26) or (14) and the structure of the ferrule, there is at least some direct contact between the ferrule and the optical fibers. Thus, the Examiner is maintaining the position that the ferrule in Hamlin et al. is directly connected to the optical fiber.

Appellant further states that Hamlin et al. fails to teach a ferrule with an outer diameter which is substantially the same as an outer diameter of the elongated shaft. The claims call for the proximal end of the elongated shaft (which the Examiner equates with element 56) to have the same diameter of the proximal end of the ferrule. As shown in the Figure reproduced above with respect to the grounds of rejection over Hamlin et al., the two diameters that are indicated appear to be identical and are clearly "substantially the same". Thus, the Examiner is maintaining the position that Hamlin et al. teach such structural relationships.

Appellant further states that Hamlin et al. does not teach "a ferrule having a first position where it is secured to the elongated shaft and a second position where it is released from the shaft. No explanation is give as to why Appellant would even make such a statement. As

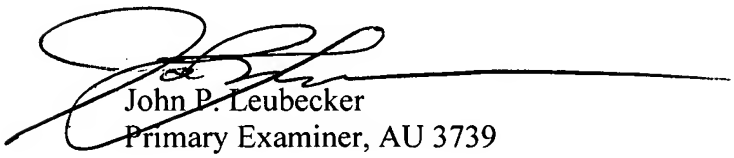
pointed out in the grounds of the rejection, Figure 1 shows a secured position and Figures 3 and 4 shows a released position. Thus, the Examiner is maintaining his position.

Regarding claim 17, Appellant again only states that the ferrule of Hamlin et al. is not configured to engage a rotatable mechanical connector such that the ferrule rotates when engaged to the mechanical connector. The funny thing about threads (which provide for a mechanical connector at 42 between the optical device (camera 22) and the ferrule) is that there is engagement along with relative rotation between the mating threaded components for a while, and then, when the threads secure the components together, rotation of one component can simultaneously rotate the other component. In either case, the limitation of claim 17 mentioned above would be met. Thus, the Examiner is maintaining his position.

Given no convincing evidence or persuasive arguments that the Examiner has made an error in rejecting claims 1 and 17, as well as all dependent claims listed in the rejection, over Hamlin et al., the Examiner respectfully maintains the position that Hamlin et al. anticipates each and every element and limitation of at least claims 1 and 17.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



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